FACT SHEET FOR NPDES PERMIT WA-000119-8
FACILITY NAME: LEHIGH NORTHWEST CEMENT COMPANY

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INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has authorized the State of Washington to administer the NPDES permit program. Chapter 90.48 RCW defines the Department of Ecology's authority and obligations in administering the Wastewater Discharge Permit Program.

The regulations adopted by the State include procedures for issuing permits (Chapter 173-220 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least 30 days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A—Public Involvement of the fact sheet for more detail on the public notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit, and parties submitting comments will receive a copy of the Department's response.

GENERAL INFORMATION	
Applicant	Lehigh Northwest Cement Company
Facility Name and Address	Lehigh Northwest Cement Company P.O. Box 37 Bellingham, WA 98227
Facility Contact	Wayne Bratz, Manager Bellingham Plant (360) 733-6720
Type of Facility	Cement Producer
SIC Code	3270
Discharge Location	Bellingham Bay - Class A Marine Latitude: 48° 45' 58" N Longitude: 122° 31' 24" W
Waterbody ID Number	WA-01-0050

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

The cement plant at this site began operations in 1913. A kiln was operated at this site until 1987, at which time it was shut down. Prior to the kiln being shut down, contact cooling water was employed for cooling the cement coming from the process. The wet cement-making process formerly employed at this site has been replaced with a dry process. Prior to the shutdown of kiln operations in 1987, two outfalls were operated at this site. One outfall was used for contact wastewater. The other was used for noncontact wastewater.

An NPDES permit was issued to Tilbury Cement Company on June 27, 1994. The permit contained an authorization to discharge noncontact cooling water, storm water, and truck wash water to Outfall 001. This outfall was identified in the fact sheet associated with the permit, as a 24-inch corrugated metal pipe which discharges to Bellingham Bay. The pipe designated as Outfall 001 ends approximately 70 feet prior to reaching Bellingham Bay, and flows over riprap and coarse rock for the remainder of the route. This outfall remains in use and is the sole outfall discharging waste water and channeled storm water to Bellingham Bay from this site.

The permit also authorized discharge of truck wash water to ground. Thus, the permit authorized discharge of truck wash water to both the direct discharge point (Outfall 001) and to ground water. Both of the discharge points were subject to the same pH limitations (within the range of 6.0 to 9.0). The surface water discharge was also subject to an oil and grease limitation (10 mg/L), and a TSS limitation (50 mg/L). The permit was extended on June 14, 1999, with an expiration date of June 27, 2004.

On February 9, 1995, the Department received a request from Tilbury Cement Company, that its permit be modified to authorize discharge of the truck wash water to Outfall 001 (i.e. direct discharge to Bellingham Bay). On April 17, 1995, the Department responded by letter, that the permit already authorized discharge of truck wash water to surface water. Tilbury Cement proceeded to connect its truck wash discharge to Outfall 001, but at a point following the final pond (Pond No. 2).

The Department extended the Permittee's NPDES permit for a period of five years under a letter dated June 14, 1999.

According to the plant manager, virtually all of the soil below the top layers of soil at the site is sand and gravel. The Site Hazard Assessment Report (author not specified, report not dated) in the Department's Toxics Cleanup Program file for this site contains a characterization of the ground water as having a gradient to the south and west, and having a depth from the surface of approximately 70 feet. This corresponds with the height of bluff height of 70 feet. (The pipe associated with Outfall 001 carries the noncontact cooling water, storm water, and beginning in 1995, the truck wash water, down the bluff, under a railway overpass [as shown in Figure 1], to discharge to a riprapped slope leading to Bellingham Bay.)

Vanillin black liquor solids were employed at the plant for dust control purposes, for a period in the past. This material contained small amounts of toluene. Based on tests conducted in 1992, the Department concluded that any organic compounds in the surface water and ground water at the site were well below the MTCA Level B cleanup criteria.

The water used at the site comes from a well. According to Mr. Bratz, the natural pH of the well water is approximately 6.0. The low pH of the supply water together with the relatively low volume (approximately 10 percent of total discharge volume) of the truck wash water may enable the combined truck wash/storm water/noncontact cooling water to meet pH standards without neutralization.

The Permittee, in a letter dated November 14, 2005, requested that the NPDES permit be modified to change the name of the Permittee from Tilbury Cement Company to Lehigh Northwest Cement Company. The Permittee submitted documentation for the name change in the form of an Amendment to Articles of Incorporation, which was filed with the Secretary of State, of the State of Washington, on January 31, 2002. Mr. Bratz has applied for reissuance of the permit under the name of the new company (Lehigh Northwest Cement Company).

INDUSTRIAL PROCESS DESCRIPTION - CEMENT MANUFACTURE

The plant is employed in the production of cement using clinker and gypsum. Horizontal ball mills are employed to grind and mix the cement raw materials using a dry process. Water used to cool the ball mill bearings results in noncontact cooling water. The bearing water flows in an open concrete channel from the grinding mill building to a concrete pond with dimensions of approximately 10 feet by 20 feet, followed by a second pond with a clay bottom, connected to the outfall pipe (Outfall 001). During times of full production, the noncontact water varies from 80,000 gallons per day to 130,000 gallons per day.

Clinker and gypsum are the main raw materials used for making the cement. The clinker is approximately 94 percent by weight of the dry components used to manufacture cement. The gypsum is approximately 6 percent of the product by weight. The clinker is a mixture, which contains limestone, shale, silica, and iron. The clinker employed at the plant at this time is trucked in from Canada. At the time of the most recent inspection (September 21, 2005), the plant was running significantly below its capacity, due to supply constraints affecting the Canadian source. The plant was receiving 150 tons per day from Canada during the month of the inspection. Some gypsum is received by ship from the city of Bellingham. Dust associated with unloading, and the greater volume of clinker needed compared to gypsum, makes water transport of clinker impractical. At the maximum rate of production, four 24-hour shifts are employed per week.

INDUSTRIAL PROCESS - TRUCK WASH WATER

Water used to wash dust off trucks is discharged at an average rate of 1500 gallons per day and a maximum rate of 6000 gallons per day. The trucks which are washed at this site consist of covered trucks which transport the dry cement to customers off-site. Ready-mix trucks are not washed at this site. Soap and detergents are not used in the washing process. The truck wash wastewater was formerly infiltrated into the ground by means of a large diameter (eight- or ten-foot diameter)

culvert set vertically into the ground. At this time, the truck wash water is directed through a concrete settling vault, which is approximately eight feet in diameter and six feet deep, and then, as a result of rerouting, enters the outfall pipe at a point following the second pond.

The truck wash water discharge from the truck wash sump is connected to the pipeline comprising Outfall 001 at a point downstream of the two ponds (Pond No. 1 and Pond No. 2).

NONCONTACT COOLING WATER

Horizontal ball mills are employed to grind and mix the cement raw materials using a dry process. Water used to cool the ball mill bearings results in noncontact cooling water. The bearing water flows in an open concrete channel from the grinding mill building to a concrete pond with dimensions of approximately 10 feet by 20 feet, followed by a second pond with a clay bottom prior to joining the outfall pipe (Outfall 001). During times of full production, the noncontact water varies from 80,000 gallons per day to 130,000 gallons per day.

Compressors at the site are air-cooled and are not a source of noncontact cooling water discharge.

STORM WATER

A small portion of the plant at the west\northwest end of the site is drained by means of sheet flow off the property. The industrial areas are predominantly drained by means of three routes. The central route consists of the trench, which runs east\west between the processing buildings, and enters the concrete settling pond (Pond No. 1), before entering settling Pond No. 2. Storm water from the northern portion of the site is directed to settling Pond No. 2. Storm water from the southern portion of the site bypasses the two settling ponds and is connected directly to Outfall 001. Storm water falling on the truck wash pad passes through the truck wash settling vault prior to its discharge to Outfall 001.

POND NO. 2

The pond receiving the cooling water and storm water, designated Pond No. 2, is approximately 25 feet by 15 feet in dimension. The pond has numerous aquatic/wetland plants growing in and around it. The pond is also stocked with goldfish. According to the plant manager, a clay layer near the surface has a thickness of approximately 16 feet, which effectively prevents infiltration. Despite the apparent de facto sealed nature of the pond, an authorization to discharge to ground water from this pond has been incorporated in the proposed permit due to the absence of an engineered plastic or concrete liner.

PERMIT STATUS

A permit for this facility (then Tilbury Cement Company) was issued on June 27, 1994. The permit contained effluent limitations on oil and grease, pH, and total suspended solids (TSS) at Outfall 001 (discharge to Bellingham Bay), and pH at Outfall 002 (discharge to ground water.)

The permit was extended for a period of five years under the Department of Ecology's letter of June 14, 1999.

The Department received an application for renewal from Lehigh Northwest Cement Company on December 28, 2005. The application was accepted as complete by the Department on January 4, 2006.

The limitations in the existing permit are shown in the table below:

Limitations – Sample Point 001 (Discharge to Bellingham Bay) Existing Permit Issued June 27, 1994, and Extended June 14, 1999		
Pollutant Parameter	**Average Monthly**	**Daily Maximum**
Oil and Grease (mg/L)	10	15
pH (standard pH units)	Within the range of 6.0 to 9.0	
Total Suspended Solids (TSS, mg/L)	N/A	50

Limitations – Sample Point 002 (Discharge to Ground Water) Existing Permit Issued June 27, 1994, and Extended June 14, 1999		
Pollutant Parameter	**Average Monthly**	**Daily Maximum**
pH (standard pH units)	Within the range of 6.0 to 9.0	

SUMMARY OF COMPLIANCE WITH THE PERMIT ISSUED JUNE 27, 1994, AND EXTENDED JUNE 15, 1999

The facility last received an inspection on September 21, 2005.

Based on information submitted on Discharge Monitoring Reports during the period January 2003 through November 2005, an exceedance of the upper pH limitation occurred at Sample Point 001 (discharge to Bellingham Bay) in November 2003. A warning letter was issued by the Department on March 23, 2004. The pH value associated with this violation was 9.8 standard pH units.

WASTEWATER CHARACTERIZATION

The proposed wastewater discharge is characterized for the following regulated parameters, based on data submitted by the Permittee in Discharge Monitoring Reports submitted by the Permittee, as shown in the following table.

Comparison of Reported Values With Surface Water and Ground Water Criteria Sample Point 001 (Discharge to Bellingham Bay) January 2003 - November 2005						
Pollutant Parameter	**Minimum Reported Concentrations**	**Average Reported Concentration**	**Maximum Reported Concentration**	**Surface Water Quality Criteria (Marine, Acute)**	**Surface Water Quality Criteria (Marine, Chronic)**	**Ground Water Quality Criteria**
Flow, Maximum (gpd)	60000	84671	95000	N/A	N/A	N/A
Flow, Average (gpd)	45000	59988	82000	N/A	N/A	N/A
Copper, dissolved (mg/L)	<0.01	<0.01	<0.01	4.8	3.1	1.0
Chloride (mg/L)				N/A	N/A	250
pH	6.4	NM	8.0			N/A
TSS	<1	1.6	16			N/A
Oil & Grease	<1.0	1.0	3.0			

Comparison of Reported Values With Surface Water and Ground Water Criteria Sample Point 002 (Discharge to Groundwater) January 2003 - November 2005						
Pollutant Parameter	**Minimum Reported Concentrations**	**Average Reported Concentration**	**Maximum Reported Concentration**	**Surface Water Quality Criteria (Marine, Acute)**	**Surface Water Quality Criteria (Marine, Chronic)**	**Ground Water Quality Criteria**
Chloride (mg/L)	10	20.6	25	N/A	N/A	250
Sulfate (mg/L)	18	32	50	N/A	N/A	250
pH (standard pH units)	6.4	NM	8.0	Not outside the range of 7.0 - 8.5		N/A
TDS (mg/L)	170	234	372	N/A	N/A	
Nitrate, as N (mg/L)	1	2.1	3	N/A	N/A	10
Total Petroleum Hydrocarbons (mg/L)	<.005	0.63	1	N/A	N/A	N/A
Oil & Grease (mg/L)	<1.0	1.0	3.0	N/A	N/A	N/A

SEPA COMPLIANCE

The wastewater discharge for which reauthorization is sought is a preexisting discharge which is authorized under an existing (extended) NPDES permit. Therefore, submittal of a SEPA checklist is not required.

PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in an NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the surface water quality standards (Chapter 173-201A WAC), ground water standards (Chapter 173-200 WAC), sediment quality standards (Chapter 173-204 WAC), or the National Toxics Rule (40 CFR 131.36). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the State of Washington were determined and included in this permit. The Department of Ecology does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent**.** Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation**.** Effluent limits are not always developed for pollutants that may be in the discharge but not reported as present in the application. In those circumstances, the permit does not authorize discharge of the non-reported pollutants. Effluent discharge conditions may change from the conditions reported in the permit application. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department of Ecology. The Permittee may be in violation of the permit until the permit is modified to reflect additional discharge of pollutants.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

The limitation for total petroleum hydrocarbons applied in the proposed permit is 10 mg/L. This limit is a technology-based limitation, which is considered to be consistent with AKART requirements. This limitation, on the basis of a daily maximum, is more stringent than the limitation placed on oil and grease in the existing NPDES permit, but is considered by the Department to be necessary to make the proposed limitations consistent with State AKART requirements. The basis for the limitation has been changed from that of oil and grease to that of petroleum hydrocarbons, as total petroleum hydrocarbons are the type of oliferous pollutants which would be most expected to be present due to the type of industrial activities conducted at this site.

The pH limitation employed in the proposed permit for discharge to ground water is 7.0 to 8.5 standard pH units. This limitation is a technology-based limitation which is considered to be consistent with State AKART requirements. The basis for the determination of this limitation as being consistent with AKART is the ability of gravel mining and cement production operations, which are considered to be substantially similar to the applicant, to comply with this limitation. The limitation of not outside the range of 7.0 to 8.5 standard pH units is used in the general permit applied to gravel mining and cement production facilities.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 contains the requirement that waste discharge permits be conditioned such that the discharge will meet established surface water quality standards. The Washington State surface water quality standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual wasteload allocation (WLA) or on a WLA developed during a basin-wide total maximum daily loading study (TMDL).

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the Washington State's water quality standards for surface waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in receiving water while remaining protective of aquatic life. Numerical criteria set forth in the water quality standards are used along with chemical and physical data for the waste water and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

The pH limitation for discharge to surface water employed in the proposed permit is based on state water quality criteria listed in WAC 173-201A for Class A marine waters. The limitation is not outside the range of 7.0 to 8.5 standard pH units.

The temperature water quality criterion for Class A marine waters is 16 degrees Celsius. However, when natural conditions exceed 16 degrees Celsius, no temperature increases are allowed which will raise the receiving water temperature by greater than 0.3 degrees Celsius. At this time, the Department does not have sufficient information to determine whether a reasonable potential for violation of temperature criteria exists from this facility. Therefore, the Department has not included a temperature limitation in the proposed permit, but will, instead, require temperature monitoring to be conducted in order to determine whether a reasonable potential for such violations exists. If it is determined that there is a reasonable potential for temperature violations to exist, the Department will place a limitation for temperature in the permit under a modification or reissuance of the permit.

The turbidity limitation applicable to marine waters in WAC 173-201A is "Turbidity shall not exceed five NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU. Due to the Department's determination that the background turbidity of Bellingham Bay is expected to be well below 50 NTU at most times, and the Department's determination that background monitoring of turbidity in Bellingham Bay is not practical, the Department has determined to employ a turbidity limitation of ten NTU (absolute, as opposed to above background), as being functionally equivalent to the water quality standard.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA 1992). These criteria are designed to protect humans from cancer and other diseases and are primarily applicable to fish and shellfish consumption and drinking water from surface waters. Based on analytical data, as well as consideration of the source of the waste water, the discharge of which is being permitted, the Department has determined that there is not likely to be a reasonable potential to exceed human health-based criteria, by the contemplated discharge. Therefore, no numerical limitations have been incorporated in the permit based on human health criteria.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The Washington State's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall be protected. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC. Therefore, the Department will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic waterbody uses. As the receiving water is a marine water, 7Q10 criteria for streamflow are not applicable for determining critical conditions. Periods of slack tide associated with low velocities of currents, which are mainly tidally induced, would be expected to correlate with critical conditions with respect to dilution effects. However, no dilution zone has been authorized as a condition of this permit. Therefore, tidal current velocities are not meaningful from the standpoint of regulatory context, for calculation of numeric limitations. Critical conditions for water temperature quality criteria in terms of *change* in temperature would be expected to occur in the winter. Critical conditions for water quality criteria in terms of absolute (as opposed to change) temperature would be expected to occur in summer months. Winds coming from the direction of the shore would also be expected to increase receiving water temperatures and could be expected to be positively associated with critical conditions. Periods of upwelling would be expected to result in a cooler receiving water.

CONSIDERATION OF SURFACE WATER QUALITY-BASED LIMITS FOR NUMERIC CRITERIA

Toxic Pollutants—Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the surface water quality criteria. This process occurs concurrently with the derivation of technology-based effluent limits. Facilities with technology-based effluent limits defined in regulation are not exempted from meeting the water quality standards for surface waters or from having surface water quality-based effluent limits.

WHOLE EFFLUENT TOXICITY

The water quality standards for surface waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the waste water in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing.

Toxicity caused by unidentified pollutants is not expected in the effluent from this discharge as determined by the screening criteria given in Chapter 173-205 WAC. Therefore, no whole effluent toxicity testing is required in this permit. The Department may require effluent toxicity testing in the future if it receives information that toxicity may be present in this effluent.

SEDIMENT QUALITY

The Department has promulgated aquatic sediment standards (Chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require Permittees to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400).

The Department has determined through a review of the discharger characteristics and effluent characteristics that this discharge has no reasonable potential to violate the sediment management standards.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated ground water quality standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

As Pond No. 2, although placed over a relatively impervious natural clay stratum, does not contain an engineered impervious plastic or concrete liner, the proposed and existing permits contain an authorization to discharge to ground water with certain limitations and monitoring requirements. This sample point is designated Sample Point 002 in the proposed permit.

As one of the ingredients of cement is gypsum (a mineral composed of calcium sulfate), the potential of the discharge to exceed the groundwater standard for sulfate was considered. The groundwater standard for sulfate is 250 mg/L. As shown in the table in the wastewater characterization section above, effluent sulfate values have varied between one and fifty mg/L. Therefore, no sulfate monitoring is included in the proposed permit.

The potential to exceed groundwater chloride standards was also considered. As the table in the wastewater characterization section above indicates, chloride values have varied between 10 and 25 mg/L, the Department has concluded that there is no reasonable potential to exceed the groundwater quality standard chloride (250 mg/L).

The pH criterion listed in WAC 173-201A for Class A marine waters is within the range of 7.0 to 8.5 standard pH units. The pH ground water criterion listed in WAC 173-200 WAC is within the range of 6.5 to 8.5. As sand and gravel mines and cement raw material operations have been able to comply with the groundwater discharge criterion, the groundwater discharge limitation is considered to be consistent with state AKART requirements. Therefore, a pH limitation of 7.0 to 8.5 has been placed in the proposed permit for both discharges to ground water and discharges to Bellingham Bay.

The Department has determined that the Permittee has a reasonable potential to exceed the groundwater criterion for pH. The Department did not consider possible significant attenuation effects likely to occur during the transit of any of the water infiltrating through the pond bottom to the ground water approximately 70 feet below the pond bottom. Therefore, the pH limitations can be considered to be conservative with respect to protection of groundwater characteristics. A limitation and monitoring requirements have been placed in the proposed permit to ensure compliance with ground water standards for pH.

COMPARISON OF EFFLUENT LIMITS WITH THE CURRENT PERMIT

Comparison of Limitations for Discharge to Bellingham Bay in the Existing and Proposed Permit (Sample Point 001)		
Pollutant Parameter	**Existing Limitation**	**Proposed Limitation**
Oil and Grease (mg/L)	10 average monthly 15 maximum daily	N/A
Total Petroleum Hydrocarbons (mg/L)	N/A	10 daily maximum
pH (standard pH units)	Within the range 6.0 to 9.0	Within the range 7.0 to 8.5
Total Suspended Solids (mg/L)	50	No limitation (replaced by a limitation for turbidity)
Turbidity (NTU)	No limitation	10

Comparison of Limitations for Discharge to Groundwater in the Existing and Proposed Permit (Sample Point 002)		
Pollutant Parameter	**Existing Limitation**	**Proposed Limitation**
pH (standard pH units)	Within the range 6.0 to 9.0	Within the range 7.0 to 8.5

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring schedule is detailed in the proposed permit under Condition S1. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

LABORATORY ACCREDITATION

With the exception of certain parameters, the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories.*

OTHER PERMIT CONDITIONS

REPORTING AND RECORD KEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and record keeping requirements to prevent and control waste discharges (WAC 173-220-210).

NONROUTINE AND UNANTICIPATED DISCHARGES

Occasionally, this facility may generate waste water which is not characterized in their permit application because it is not a routine discharge and was not anticipated at the time of application. These typically are waters used to pressure test storage tanks or fire water systems or leaks from drinking water systems. These are typically clean waste waters but may be contaminated with pollutants. The permit contains an authorization for nonroutine and unanticipated discharges. The permit requires a characterization of these waste waters for pollutants and examination of the opportunities for reuse. Depending on the nature and extent of pollutants in this waste water and opportunities for reuse, Ecology may authorize a direct discharge via the process wastewater outfall or through a stormwater outfall for clean water, require the waste water to be placed through the facilities wastewater treatment process or require the water to be reused.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under Section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The proposed permit requires the Permittee to update the existing plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste.

This proposed permit contains a requirement, under authority of RCW 90.48.080, that the Permittee update the existing solid waste plan to prevent solid waste from causing pollution of waters of the state.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary, to meet water quality standards for surface waters, sediment quality standards, or water quality standards for ground waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this proposed permit be issued with an expiration date, which will result in a period of five years between the issuance date and the expiration date.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Tsivoglou, E.C., and J.R. Wallace.

1972. Characterization of Stream Reaeration Capacity. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

Washington State Department of Ecology.

Laws and Regulations (http://www.ecy.wa.gov/laws-rules/index.html)

Permit and Wastewater Related Information
(http://www.ecy.wa.gov/programs/wq/wastewater/index.html)

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on January 6, 2006, and January 13, 2006, in the *Bellingham Herald* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department published a Public Notice of Draft (PNOD) on April 28, 2006, in the *Bellingham Herald* to inform the public that a draft permit and fact sheet were available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents were available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments were mailed to:

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008-5452

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the 30-day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least 30 days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within 30 days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, 425-742-7201, or by writing to the address listed above.

APPENDIX B—GLOSSARY

Acute Toxicity—The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

AKART—An acronym for "all known, available and reasonable methods of treatment."

Ambient Water Quality—The existing environmental condition of the water in a receiving waterbody.

Ammonia—Ammonia is produced by the breakdown of nitrogenous materials in waste water. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect waste water.

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)—Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5—Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass—The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine—Chlorine is used to disinfect waste waters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity—The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)—The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling—A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling—A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity—Clearing, grading, excavation, and any other activity which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Continuous Monitoring—Uninterrupted, unless otherwise noted in the permit.

Critical Condition—The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Dilution Factor—A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction e.g., a dilution factor of 10 means the effluent comprises 10 percent by volume and the receiving water 90 percent.

Engineering Report—A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria—Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the waste water. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated waste water and/or the presence of animal feces.

Grab Sample—A single sample or measurement taken at a specific time or over as short a period of time as is feasible.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic waste water. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Major Facility—A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)—The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility—A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone—An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)—The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both State and Federal laws.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)—A calculated value 5 times the MDL (method detection level).

Responsible Corporate Officer—A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)—Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

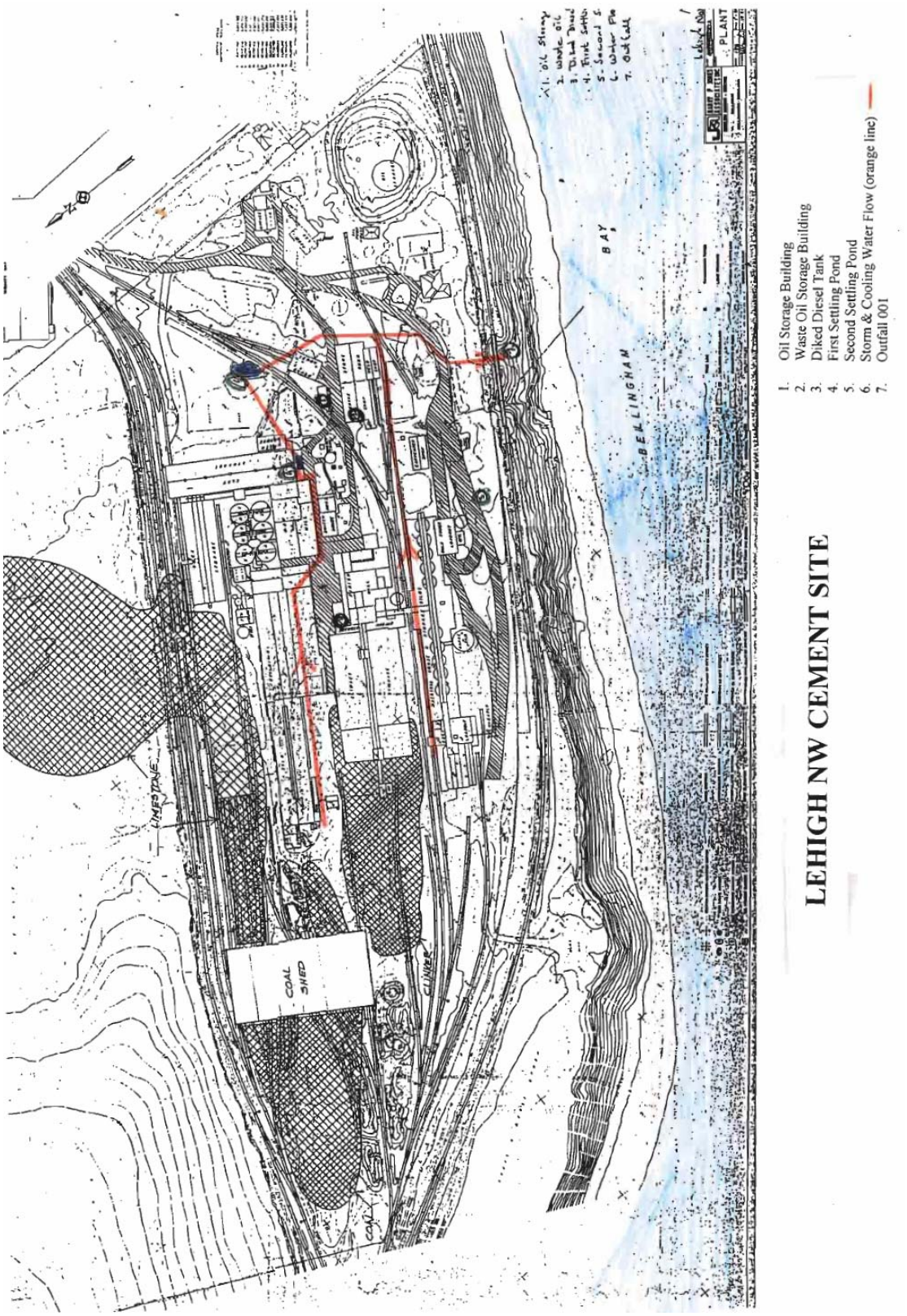
State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the State of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body, or a constructed infiltration facility.

Upset—An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C—SITE MAP



APPENDIX D—RESPONSE TO COMMENTS